## THE PASSENGER PIGEON (ECTOPISTES MIGRA-TORIUS) IN CONFINEMENT.

## BY RUTHVEN DEANE.

In 'The Auk' (Vol. XIII, 1896, p. 234), I published an account of 'The Passenger Pigeon in Confinement,' based on a flock of fifteen birds, some of which had been in possession of Mr. David W. Whittaker of Milwaukee, Wis., for several years. Mr. Whittaker raised this flock from a pair of young birds which he received from a young Indian who trapped them in Shawano County in northeastern Wisconsin.

Between the time of my inspection of the pigeons (March 1, 1896) and the spring of 1897, the whole flock was purchased by Prof. Charles O. Whitman of the University of Chicago, but the following year he returned seven of the birds to Mr. Whittaker. My sincere thanks are due to Prof. Whitman for furnishing me with the following detailed memoranda of the increase and decrease of the flock which remained in his possession until the winter of 1907, when the last bird died.

"1896.— On March 14, purchased three Passenger Pigeons from David W. Whittaker of Milwaukee, Wis.  $(1\vec{o}, 2 + 1)$ . In October purchased another pair from the same flock.

"1897.— In March purchased the balance of the flock consisting of ten birds, thus giving me the entire flock of fifteen birds. During this year nine young were hatched but only four lived, giving me a flock of nineteen.

"1898.— Gave seven birds back to Mr. Whittaker and from the twelve remaining five eggs were hatched, but only two of the young lived, leaving me with a flock of fourteen.

"1899.— Fifteen eggs were laid from February 24 to April 17, but none of these hatched, although five or six developed to the point of hatching. From April 21 to 23, four more eggs were laid and three of these hatched, but the young all died. May 28, took the flock to Woods Hole, Mass., but no more eggs were laid; thus 1899 proved fruitless.

"1900.— During this year fewer eggs were laid and not a single young was raised.

"1901.— Between April 24 and August 25, seven eggs were laid and all of these hatched, but two died. During the latter part of this year three grown birds died.

"1902.— Started the year with a flock of sixteen birds  $(8 \circlearrowleft, 8 \circlearrowleft)$ . Six eggs were laid, one hatched May 29, the young living until October 21. Two old birds  $(\circlearrowleft)$  escaped from the pen while at Woods Hole, Mass., and one  $(\circlearrowleft)$  was sent to the Gardens of the Cincinnati Zoölogical Co., leaving a flock of thirteen birds  $(8 \circlearrowleft, 5 \circlearrowleft)$ .

"1903.—The birds began mating in January. Two males died of tuberculosis, leaving six males and five females. Only one pair mated and built a nest, but the female produced no egg.

"1904.— Some nests were again made, no eggs being deposited, however. One pair laid twice but the eggs developed for only a few days, then halted. Evidently this means that the stock is getting weak. During the year four males and one female died, leaving a flock of six  $(2 \circlearrowleft, 4 \circlearrowleft)$ .

"1905.— One nest built but no egg laid, the female had evidently lost her power to produce even an unfertile egg. Another female, by the same male, produced a good egg which hatched under a pair of hybrids, but the young lived only twelve days.

"1906.— Two males and two females died, reducing the flock to two females.

"1907.— The two remaining females died of tuberculosis during the winter. I have two male hybrids, between a male Passenger Pigeon and the common cage Ring Dove (*Turtur risorius*). So far as tested, these hybrids have proved unfertile."

Of the seven birds returned to Mr. Whittaker in 1898, four males are still alive, and on October 25, 1907, I visited Milwaukee for the express purpose of again seeing these birds.

For some time they have been in charge of Mr. A. E. Wiedring, to whom I am much indebted for courtesies and information. I found two of the birds in fine plumage, the other two not having quite completed the moult. Mr Wiedring stated that they were apparently in a healthy condition and that he fed them almost entirely upon seeds and farinaceous food. In the spring he frequently fed them on angleworms, of which they are particularly fond, and in this respect differ entirely from the domestic pigeons. The only remaining female of the flock died the previous year,

probably of tuberculosis. In a letter from Mr. Wiedring under date of Feb. 13, 1908, he informs me that the pigeons have been in good condition since my visit the previous October, and that in about a month the birds will begin to get very restless, which is ascribed to the approaching breeding season.

For years we have known of the Passenger Pigeons in the Gardens of the Cincinnati Zoölogical Co., and I am much indebted to Mr. S. A. Stephan, General Manager, for the following report of their flock, in a letter written November 9, 1907.

"The original flock, which came from Michigan in 1875, consisted of twenty-six birds, about half males and half females. A short time later, however, five or six of these escaped. They have bred from time to time and we have raised about twenty-three birds. In no instance has more than one egg been deposited at a time. At the present time our flock has been reduced to three, one male from the original flock, now about twenty-three years old, one male, which we raised, is about eighteen years old, and one female that we obtained from Prof. Whitman's flock in 1902, which is about twelve years old. We have never detected any particular disease which has caused the decrease of the flock, but have attributed it in most cases to old age."

The remnants of the Milwaukee and Cincinnati flocks now number but seven birds (6  $\circlearrowleft$ , 1  $\circlearrowleft$ ) with little or no chance of any further reproduction.

As a sufficient time has now passed since there has been an undisputed record of a flock, or even a single bird, having been seen, those who have given this subject much attention, are forced to believe that this noble bird, in its wild state, is now extinct. Every little while reports appear in the press or sporting papers, that our Wild Pigeon has again been seen, but we have no specimen or facts to verify the record. How many times have I run down some of these reports, only to find them to be cases of either mistaken identity—Turtle Doves—or humbugs. It is hard to believe that this bird, which within a comparatively short time traversed the country in countless numbers, has been wiped off the face of the earth through the agency of man, yet when we read the mass of evidence which Mr. W. B. Mershon has brought together in 'The Passenger Pigeon,' of the wholesale slaughter which has been going on for so many years, we stop and wonder.